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## REGIONAL TRENDS IN AWARDS OF INCAPACITY BENEFIT BY CAUSE

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### Abstract

**Background**—Since the early 1990s, rates of incapacity benefit (IB) in Britain for musculoskeletal complaints have declined, and they have been overtaken by mental and behavioural disorders as the main reason for award of IB.

**Aims**—To explore reasons for this change.

**Methods**—Using data supplied by the Department for Work and Pensions, we analysed trends in the ratio of new IB awards for mental and behavioural disorders to those for musculoskeletal disorders during 1997–2007 by Government region.

**Results**—In Great Britain overall, the above ratio more than doubled over the study period, as a consequence of falling numbers of new awards for musculoskeletal disorders. The extent to which the ratio increased was smallest in London (50%) and South-East England (56%), and was progressively larger in more northerly regions (>150% in North-East England and Scotland).

**Conclusions**—The differences in trends between regions seem too large to be explained by differential changes in working conditions, patterns of employment, or the rigour with which claims were assessed. An alternative explanation could be that the main driver for the trends has been culturally determined changes in health beliefs and expectations, and that these cultural changes began in London and the South-East, only later spreading to other parts of Britain.

### Keywords

social security; incapacity; mental; musculoskeletal; trends; health beliefs

### Introduction

In Britain, over the four decades from 1950 to 1990, there was a substantial growth in incapacity for work attributed to musculoskeletal disorders. In particular, social security awards of Incapacity Benefit (IB) for low back pain increased approximately eightfold [1]. This striking trend occurred at a time when the physical demands of work were generally falling, with increasing mechanisation and a shift in employment from manual to non-manual jobs. Since the early 1990s, rates of IB for musculoskeletal complaints have

declined, and they have been overtaken by mental and behavioural disorders as the main reason for award of IB [2].

To explore possible reasons for this transition, we analysed trends in IB awards by cause and geographical region.

## Methods

The Department for Work and Pensions provided us with annual numbers of new awards for IB because of mental and behavioural disorders and musculoskeletal disorders during 1997-2007, estimated from a 5% sample, and broken down by Government Office Region. From these, we derived simple summary statistics, including an index of change in the relative frequency of the two categories of award between the beginning and end of the study period. This was defined as:

$$\frac{\text{New awards for mental and behavioural disorder in 2007}}{\text{New awards for musculoskeletal disorders in 2007}} \div \frac{\text{New awards for mental and behavioural disorders in 1997}}{\text{New awards for musculoskeletal disorders in 1997}}$$

Associated 95% confidence intervals (CIs) were calculated based on an approximate maximum likelihood method, which assumed that the numbers of awards by cause in the study samples were Poisson distributed independent random variables.

## Results

In Great Britain as a whole, the annual number of new IB awards for mental and behavioural disorders remained fairly constant over the period of study, ranging from 210,120 in 2006 to 236,080 in 2003, whereas new awards for musculoskeletal disorders declined substantially from 181,820 in 1997 to 84,420 in 2007. Thus, the ratio of awards for mental and behavioural disorders to those for musculoskeletal disorders increased progressively (Figure 1).

There were, however, differences in the pattern by region (Table 1). In 1997, the ratio of new awards for mental and behavioural disorders to those for musculoskeletal disorders varied from 0.88 in North-East England to 1.66 in South-East England, while in 2007, the lowest ratio (2.20) was in the West Midlands, and the highest (3.63) in Scotland. The variation between regions was driven principally by differences in the extent to which new awards for musculoskeletal disorders reduced, while the annual numbers of awards for mental and behavioural disorders remained fairly constant.

Figure 2 summarises the change in the relative frequency of the two causes of incapacity between 1997 and 2007 by region. A consistent geographical pattern is apparent, the index of change being higher in regions further from London. The lowest value for the index (in London) was 1.50 (95% CI 1.31-1.72), and the highest value (in North-East England) was 2.77 (95% CI 2.33-3.30).

## Discussion

Our analysis indicates that the reduction in IB awards for musculoskeletal disorders relative to mental and behavioural disorders did not occur uniformly across Great Britain. Over the period that we studied, the ratio of awards for mental illness to those for musculoskeletal

disorders increased by more than 150% in North-East England and Scotland, but only by 50% in London and 56% in South-East England.

These differences are based on large samples of claims in each region (a minimum of 280 by cause and region in a single year), and cannot plausibly be attributed to chance. Nor can they be explained by differential changes by region in overall propensity to claim IB, which would be expected to affect claims for both categories of disorder to a similar extent. During the period of study, there was a growing awareness of psychosocial influences on incapacity from common musculoskeletal disorders, but this did not lead to any changes in the criteria for award of benefit, or to advice that medical examiners should assess claims for musculoskeletal disorders more stringently.

Without data on the numbers of employed workers “at risk” in each region and year, it is not possible to establish the exact extent to which the trends in relative frequencies reflect an increase in the incidence of awards for mental and behavioural disorders and a reduction in rates of award for musculoskeletal complaints. However, in each region, the absolute number of awards for mental and behavioural disorders was much the same in 2007 as in 1997, whereas the numbers of new awards for musculoskeletal disorders reduced sharply. Moreover, national data from the Labour Force Survey for 2001–2008 indicate a marked decline over this period in the average number of days off work per worker because of musculoskeletal disorders that the worker considered to be caused or made worse by work, whereas corresponding rates for “stress” were fairly constant [3]. This suggests that the major driver for the variation in trends by region lay in differences in the rate of decline of claims for musculoskeletal disorders.

The differences between regions seem too large to be explained by differential changes in working conditions and patterns of employment. For example, a systematic review and meta-analysis has suggested that odds of low back pain (the major musculoskeletal reason for IB awards) are elevated approximately 1.9-fold in people whose work involves high exposure to manual materials-handling [4]. This would imply that even if an entire population shifted from manual to non-manual work, the resultant decrease in low back pain would be less than 50%.

An alternative explanation could be that the main driver of the transition from musculoskeletal to mental and behavioural disorders as causes of incapacity has been culturally determined changes in health beliefs and expectations, and that these cultural changes began in London and South-East England, only later spreading to other parts of Britain. In support of this hypothesis, pessimistic beliefs about prognosis have been shown to predict subsequent poor outcome in people with LBP [5], and in Victoria, Australia, a media campaign to modify people’s beliefs and expectations about back pain was followed by a reduction in morbidity that did not occur in New South Wales, where there was no campaign [6].

It is important to understand the reasons for the remarkable trends that have been demonstrated since there may be practical implications for future prevention of illness and disability. If they have indeed been driven by changes in health beliefs and expectations, that would suggest a need for care not to adversely influence such beliefs by overemphasising risks to musculoskeletal health from manual handling. Moreover, similar arguments may apply to mental health problems. Preventive strategies that focus on reducing harmful stresses in the workplace may modify expectations in a way that perversely leads to an increase in illness. A better option might be to promote ways in which well designed work can lead to psychological benefits.

### Key points

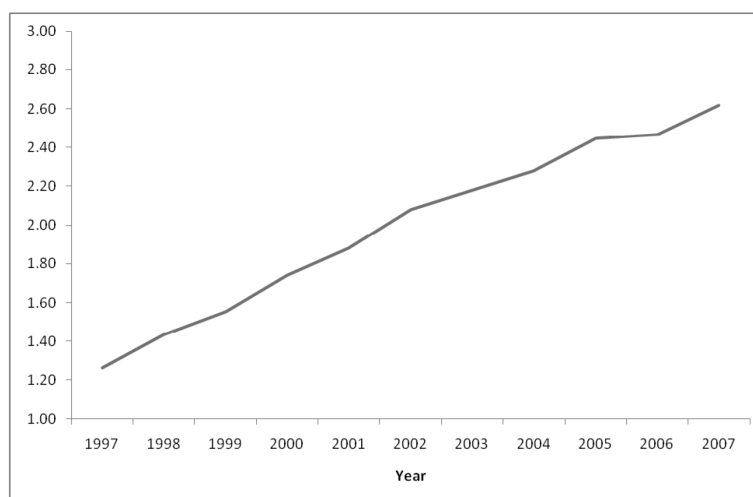
- During 1997-2007, new awards of incapacity benefit for musculoskeletal disorders in Britain declined by more than 50%, while there was little change in awards for mental illness.
- The change occurred across the country, but was threefold greater in North-East England and Scotland than in London and South-East England.
- Such large regional differences cannot plausibly be explained by differential changes in overall propensity to claim benefit, stringency of medical assessment or occupational exposures, but might reflect culturally determined changes in health beliefs and expectations.

### Acknowledgments

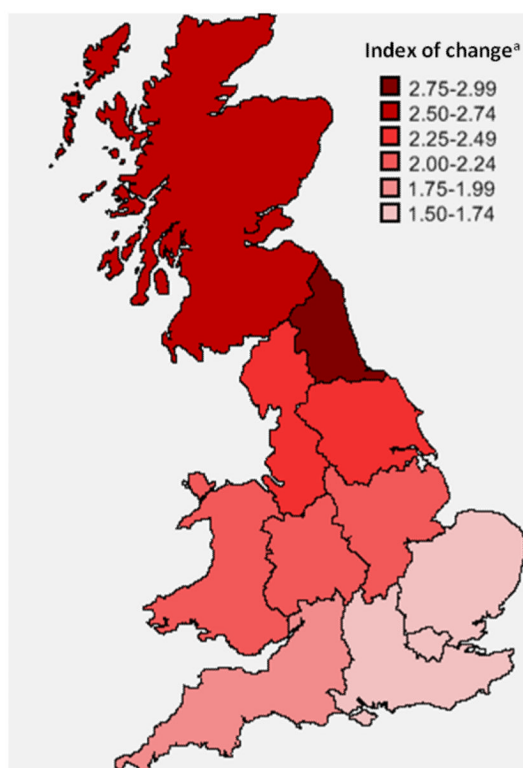
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**Figure 1.**  
Ratio of new awards of Incapacity Benefit for mental and behavioural disorders to those for musculoskeletal disorders by year, Great Britain, 1997-2007



**Figure 2.**  
Change in relative frequency of new awards of Incapacity Benefit for mental and behavioural disorders and musculoskeletal disorders between 1997 and 2007 by region  
<sup>a</sup> For definition of index, see text

**Table 1**

New awards of Incapacity Benefit by cause and region, 1997, and 2007

Region	1997			2007		
	Mental and behaviour disorders	Musculoskeletal disorders	Ratio	Mental and behaviour disorders	Musculoskeletal disorders	Ratio
London	25920	16780	1.54	22880	9860	2.32
South East	20920	12640	1.66	20500	7960	2.58
South West	17640	11840	1.49	17380	5860	2.97
East of England	13580	9580	1.42	15440	6460	2.39
East Midlands	13280	12300	1.08	13320	5980	2.23
West Midlands	18760	17800	1.05	19020	8640	2.20
Wales	15100	14280	1.06	14800	6600	2.24
Yorkshire and the Humber	21120	19080	1.11	19400	7700	2.52
North West	40760	30600	1.33	34000	11340	3.00
North East	13060	14860	0.88	13640	5600	2.44
Scotland	29620	21800	1.36	30380	8380	3.63